

Amendments to the Claims:

Claims 1-20 and 22-37 are pending in the application.

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (previously presented): A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

(a) pretreating *Cryptosporidium* oocysts with a reagent so as to remove the surface layer of the oocysts to form an oocysts antigen preparation;

(b) separating the oocysts from the oocyst antigen preparation so as to obtain a separated oocyst antigen preparation free from sporozoite antigens and capable of eliciting a detectable IgG1 immune response in an animal to the surface of the oocyst;

(c) immunizing an animal with the separated oocyst antigen preparation so as to elicit an IgG1 response in the animal; and

(d) obtaining from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

Claim 2 (original): The method according to claim 1 wherein the reagent is a detergent.

Claim 3 (original): The method according to claim 2 wherein the detergent is sodium dodecyl sulphate (SDS).

Claim 4 (previously presented): The method according to claim 3 wherein the pretreating comprises boiling the oocysts in the presence of SDS to generate the oocyst antigen preparation.

Claim 5 (previously presented): The method according to claim 4 wherein the boiling of the oocysts is for at least one hour in the presence of 0.5% (w/v) SDS.

Claim 6 (previously presented): The method according to claim 1 wherein the reagent is selected from the group consisting of urea, detergents, including Triton X-100 and nonident, enzymes, including chitinase, oxidising agents, including sodium hypochlorite, sodium periodate, and ozone; and reducing agents, including mercaptol ethanol and 1,1,1-trichloro-2,2-bis[4-chlorophenyl]ethane.

Claim 7 (previously presented): The method according to claim 1 wherein the preparation of step (c) further includes one or more adjuvants.

Claim 8 (previously presented): The method according to claim 1 wherein the animal is a mouse.

Claim 9 (previously presented): A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

- (a) separating at least a portion of the *Cryptosporidium* oocysts wall from the internal sporozoites to form an oocyst-wall preparation free from sporozoite antigens;
- (b) treating the separated oocyst-wall preparation so as to obtain an isolated oocyst wall antigen preparation free from sporozoite antigens capable of eliciting a detectable IgG1 immune response in an animal to the surface of the oocyst;
- (c) immunizing an animal with the isolated oocyst wall antigen preparation so as to elicit an IgG1 immune response in the animal; and
- (d) obtaining from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

Claim 10 (previously presented): The method according to claim 9 wherein the separation of the oocyst wall from the internal sporozoites comprises inducing the oocysts to excyst followed by immuno-separation of the oocyst wall components.

Claim 11 (previously presented): The method according to claim 9 wherein the separation of the oocyst wall from the internal sporozoite comprises inducing the oocyst to excyst followed by separation of the wall components by means selected from the group consisting of centrifugation, flow cytometry, density gradient separation, precipitation, immuno-labelling, ligand-binding, biotin-labelling with separation by avidin, and chromatographic separation.

Claim 12 (previously presented): The method according to claim 10 wherein inducing the oocyst to excyst comprises freeze-thawing or physically breaking up by crushing, sonication, or grinding the oocyst.

Claim 13 (previously presented): The method according to claim 9 wherein the treating step (b) comprises physically breaking up the cell wall.

Claim 14 (previously presented): The method according to claim 9 wherein the preparation of step (c) further includes one or more adjuvants.

Claim 15 (previously presented): The method according to claim 9 wherein the animal is a mouse.

Claim 16 (previously presented): An isolated IgG1 antibody reactive to the surface of *Cryptosporidium* oocysts produced by the method according to claim 1.

Claim 17 (previously presented): The antibody according to claim 16 wherein the antibody is a monoclonal antibody.

Claim 18 (previously presented): An isolated IgG1 antibody reactive to the surface of *Cryptosporidium* oocysts produced by the method according to claim 9.

Claim 19 (previously presented): The antibody according to claim 18 wherein the antibody is a monoclonal antibody.

Claim 20 (previously presented): An isolated IgG1 antibody reactive to the surface of *Cryptosporidium* oocysts, wherein the antibody has the oocysts binding and affinity characteristics of antibody CRY104.

Claim 21 (cancelled)

Claim 22 (previously presented): The antibody according to claim 20 wherein the IgG1 monoclonal antibody is produced by hybridoma CRY104.

Claim 23 (original): The hybridoma clone CRY104.

Claim 24 (previously presented): A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

- (a) pretreating *Cryptosporidium* oocysts with a reagent that removes surface layer antigens from the oocysts to form an oocyst surface antigen preparation;
- (b) separating the oocysts from the oocyst surface antigen preparation to obtain an isolated oocyst surface antigen preparation free from sporozoite antigens;
- (c) immunizing an animal with the isolated oocyst surface antigen preparation so as to elicit an IgG1 immune response in the animal; and
- (d) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

Claim 25 (previously presented): The method according to claim 24 wherein the reagent is a detergent.

Claim 26 (previously presented): The method according to claim 25 wherein the detergent is sodium dodecyl sulphate (SDS).

Claim 27 (previously presented): The method according to claim 26 wherein the pretreating comprises boiling the oocysts in the presence of SDS to generate the oocyst surface antigen preparation.

Claim 28 (previously presented): The method according to claim 27 wherein the boiling of the oocyst is for at least one (1) hour in the presence of 0.5% (w/v) SDS.

Claim 29 (previously presented): The method according to claim 24 wherein the reagent is selected from the group consisting of urea, detergents, including Triton X-100 and nonident, enzymes, including chitinase, oxidising agents, including sodium hypochlorite, sodium periodate, and ozone; and reducing agents including mercaptol ethanol and 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane.

Claim 30 (previously presented): The method according to claim 24 wherein the preparation of step (c) further includes one or more adjuvants.

Claim 31 (previously presented): A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

- (a) separating the *Cryptosporidium* oocyst wall from internal sporozoites to form an oocyst-wall preparation free from sporozoite antigens;
- (b) immunizing an animal with the oocyst-wall preparation so as to elicit an IgG1 immune response in the animal; and
- (c) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

Claim 32 (previously presented): The method according to claim 31 wherein the separation of the oocyst wall from the internal sporozoites comprises inducing the oocyst to excyst followed by separation of the oocyst wall components from the released sporozoites.

Claim 33 (previously presented): The method according to claim 32 wherein the separation of the oocyst wall component from the released sporozoite comprises means selected from the group consisting of immuno-separation, centrifugation, flow cytometry, density gradient separation, precipitation, immuno-labelling, ligand-binding, biotin-labelling with separation by avidin, and chromatographic separation.

Claim 34 (previously presented): The method according to claim 32 wherein inducing the oocyst to excyst comprises freeze-thawing or physically breaking up by crushing, sonication or grinding the oocyst.

Claim 35 (previously presented): The method according to claim 31 wherein the treating step (b) comprises physically breaking up the oocyst wall.

Claim 36 (previously presented): The method according to claim 31 wherein the oocyst wall antigen preparation in step (c) further comprises one or more adjuvants.

Claim 37 (previously presented): A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

- (a) separating the *Cryptosporidium* oocyst wall from internal sporozoites to form an oocyst wall preparation free from sporozoite antigens;
- (b) treating the separated oocyst wall preparation to obtain an isolated oocyst wall antigen preparation free from sporozoite antigens;
- (c) immunizing an animal with the oocyst wall antigen preparation to elicit an IgG1 immune response in the animal; and
- (d) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.